



04/05/2010

Kit Components

Product code	Description
270-0614 270-0600	Variant Total GHb Program Reorder Pack

Components:

270-0082	Variant Hb Testing System Wash Solution
35169	Variant/Variant II A1c/GHb Program Calibrator
270-0077	Variant Hemolysis Reagent
270-0602	Variant/Variant II Total GHb Elution Buffer 1
270-0606	Variant/Variant II GHb Calibrator Diluent
270-0601	Variant Hemoglobin Analytical Cartridge (GHb)
270-0603	Variant/Variant II Total GHb Elution Buffer 2

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Variant Hb Testing System Wash Solution
- **Catalog or product number:** 270-0082
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment** not applicable
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **NFPA ratings (scale 0-4)**
Health = 0
Fire = 0
Reactivity = 0

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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Trade name: Variant Hb Testing System Wash Solution

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· **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** Dilute with plenty of water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

26628-22-8 sodium azide

REL (United States)	Short-term value: C 0.3** mg/m ³ , C 0.1* ppm *as HN ₃ vapor; **as NaN ₃ ; Skin
TLV (United States)	Short-term value: C 0.29** mg/m ³ , C 0.11* ppm *as HN ₃ vapor **as NaN ₃

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

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Trade name: Variant Hb Testing System Wash Solution

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9 Physical and chemical properties:

· General Information

Form: liquid
Color: Colorless
Odor: Odorless

· Change in condition

Melting point/Melting range: 0°C
Boiling point/Boiling range: 100°C

· **Flash point:** Not applicable

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapor pressure at 20°C:** 23 hPa

· **Density at 20°C:** 1 g/cm³

· Solubility in / Miscibility with

Water: Fully miscible

· **pH-value at 20°C:** 7

· **Organic solvents:** 0.0 %

· **Water:** 100.0 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Materials to be avoided:**

· **Dangerous reactions**

This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.

· **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritant effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification according to the latest version of the EU lists.

· **Target organs:** Not applicable.

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Trade name: Variant Hb Testing System Wash Solution

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12 Ecological information:

- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation**
Dispose of waste in accordance to applicable national, regional, or local regulations.
Hand over to hazardous waste disposers.
Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

- **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

- **Section 313 (40CFR372.65):**

Substance is not listed.

- **TSCA (Toxic Substances Control Act):**

Substance is listed.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

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Trade name: Variant Hb Testing System Wash Solution

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· NTP (National Toxicology Program)*Substance is not listed.***· OSHA-Ca (Occupational Safety & Health Administration)***Substance is not listed.***· Markings according to EU guidelines:***Observe the general safety regulations when handling chemicals**The substance is not subject to classification according to EU lists and other sources of literature known to us.**The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).***· National regulations****· Water hazard class:** *Generally not hazardous for water.***16 Other information:***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***· Department issuing MSDS:** *Environmental Health and Safety.***· Contact:***Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000**Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000***· * Data compared to the previous version altered.**

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Variant/Variant II A1c/GHb Program Calibrator
- **Catalog or product number:** 35169, 270-0332
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

	Human Red Cells		50-100%
57-50-1	sucrose, pure		10-20%
6381-92-6	Ethylenediaminetetraacetic acid disodium salt dihydrate	Xn, Xi; R 22-36/37/38	1.0-2.5%
151-50-8	potassium cyanide	T+, N; R 26/27/28-32-50/53	.001-.01%

- **Additional information**
Contains human sourced and/or potentially infectious components.
For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **NFPA ratings (scale 0-4)**
Health = 0
Fire = 0
Reactivity = 0
- **Special Hazards** Contains human sourced and/or potentially infectious components.

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.

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Trade name: Variant/Variant II A1c/GHb Program Calibrator

(Contd. of page 1)

- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Handle as potentially infectious.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Disinfectant
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**

57-50-1 sucrose, pure

PEL (United States)	15* 5** mg/m ³ *total dust **respirable fraction
REL (United States)	10* 5** mg/m ³ *total dust **respirable fraction
TLV (United States)	10 mg/m ³

151-50-8 potassium cyanide

PEL (United States)	5 mg/m ³ Skin
REL (United States)	Short-term value: C 5* mg/m ³ , C 4.7* ppm *10-min
TLV (United States)	Short-term value: C 5 mg/m ³ as CN; Skin

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Trade name: Variant/Variant II A1c/GHb Program Calibrator

(Contd. of page 2)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
Follow the usual biosafety practices for handling potentially infectious materials.
- **Protection of hands:** Protective gloves.
- **Material of gloves:** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

9 Physical and chemical properties:

· **General Information**

Form:	Solid.
Color:	Red
Odor:	Odorless

· **Change in condition**

Melting point/Melting range: undetermined
Boiling point/Boiling range: 100°C

· **Flash point:** Not applicable

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density:** Not determined

· **Solubility in / Miscibility with**

Water: Insoluble

· **Solvent content:**

Organic solvents:	0.0 %
Water:	1.0 %

Solids content: 100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions:** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.

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Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant/Variant II A1c/GHb Program Calibrator

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- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **Target organs:** Not applicable.

12 Ecological information:

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation**
Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**
- **Section 302/304 (40CFR355.30 / 40CFR355.40):**
None of the ingredients is listed.
- **Section 313 (40CFR372.65):**
None of the ingredients is listed.

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Trade name: Variant/Variant II A1c/GHb Program Calibrator

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· TSCA (Toxic Substances Control Act):

57-50-1	sucrose, pure
7732-18-5	water
151-50-8	potassium cyanide

· California Proposition 65:

· Developmental Toxicity

32986-56-4	tobramycin
1405-41-0	Gentamicin Sulfate

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Markings according to EU guidelines:

Observe the general safety regulations when handling chemicals

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· National regulations

· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing MSDS: Environmental Health and Safety.

· Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

*** Data compared to the previous version altered.**

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 11/13/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Variant Hemolysis Reagent
- **Catalog or product number:** 270-0077, 270-0703, 220-0006, 270-0604
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment** not applicable
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **NFPA ratings (scale 0-4)**
Health = 0
Fire = 0
Reactivity = 0

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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Trade name: Variant Hemolysis Reagent

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· **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** Dilute with plenty of water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

26628-22-8 sodium azide

REL (United States)	Short-term value: C 0.3** mg/m ³ , C 0.1* ppm *as HN ₃ vapor; **as NaN ₃ ; Skin
TLV (United States)	Short-term value: C 0.29** mg/m ³ , C 0.11* ppm *as HN ₃ vapor **as NaN ₃

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

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Trade name: Variant Hemolysis Reagent

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9 Physical and chemical properties:**· General Information**

Form: liquid
Color: Colorless
Odor: Odorless

· Change in condition

Melting point/Melting range: 0°C
Boiling point/Boiling range: 100°C

· Flash point: Not applicable

· Danger of explosion: Product does not present an explosion hazard.

· Vapor pressure at 20°C: 23 hPa

· Density at 20°C: 1 g/cm³

· Solubility in / Miscibility with

Water: Fully miscible
Organic solvents: 0.0 %
Water: 100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions**
 This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
 The substance is not subject to classification according to the latest version of the EU lists.
- **Target organs:** Not applicable.

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Trade name: Variant Hemolysis Reagent

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12 Ecological information:

- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation**
Dispose of waste in accordance to applicable national, regional, or local regulations.
Hand over to hazardous waste disposers.
Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**
- **Section 302/304 (40CFR355.30 / 40CFR355.40):**
Substance not listed.
- **Section 313 (40CFR372.65):**
Substance is not listed.
- **TSCA (Toxic Substances Control Act):**
Substance is listed.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**
Substance is not listed.
- **NTP (National Toxicology Program)**
Substance is not listed.

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Trade name: Variant Hemolysis Reagent

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· **OSHA-Ca (Occupational Safety & Health Administration)***Substance is not listed.*· **Markings according to EU guidelines:***Observe the general safety regulations when handling chemicals**The substance is not subject to classification according to EU lists and other sources of literature known to us.**The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).*· **National regulations**· **Water hazard class:** *Generally not hazardous for water.***16 Other information:***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*· **Department issuing MSDS:** *Environmental Health and Safety.*· **Contact:***Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000**Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000*· *** Data compared to the previous version altered.**

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Variant/Variant II Total GHb Elution Buffer 1
- **Catalog or product number:** 270-0602
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.
- **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**

556-50-3	N-glycylglycine	2.5-5%
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3 Hazards identification

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment** not applicable
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant/Variant II Total GHb Elution Buffer 1

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· **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

26628-22-8 sodium azide

REL (United States)	Short-term value: C 0.3** mg/m ³ , C 0.1* ppm *as HN ₃ vapor; **as NaN ₃ ; Skin
TLV (United States)	Short-term value: C 0.29** mg/m ³ , C 0.11* ppm *as HN ₃ vapor **as NaN ₃

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant/Variant II Total GHb Elution Buffer 1

(Contd. of page 2)

9 Physical and chemical properties:**· General Information**

Form:	liquid
Color:	Colorless
Odor:	Odorless

· Change in condition

Melting point/Melting range:	0°C
Boiling point/Boiling range:	100°C

· Flash point:	Not applicable
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· Danger of explosion:	Product does not present an explosion hazard.
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· Vapor pressure at 20°C:	23 hPa
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· Density at 20°C:	1 g/cm ³
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· Solubility in / Miscibility with

Water:	Fully miscible
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· pH-value at 20°C:	8.9
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· Organic solvents:	0.0 %
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· Water:	95.7 %
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10 Stability and reactivity

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· Materials to be avoided:

· Dangerous reactions

This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.

· Dangerous products of decomposition: No dangerous decomposition products known

11 Toxicological information

· Acute toxicity:

· Primary irritant effect:

· on the skin: No irritant effect.

· on the eye: No irritant effect.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification according to the latest version of the EU lists.

· Target organs: Not applicable.

DUS

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant/Variant II Total GHb Elution Buffer 1

(Contd. of page 3)

12 Ecological information:

- **Additional ecological information:**
- **General notes:**
*Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*

13 Disposal considerations

- **Product:**
- **Recommendation**
*Hand over to hazardous waste disposers.
 Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.*
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*
- **Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** *Not dangerous according to the above specifications.*

15 Regulations

- **SARA (Superfund Amendants and Reauthorization Act of 1986 - USA)**

- **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

- **Section 313 (40CFR372.65):**

Substance is not listed.

- **TSCA (Toxic Substances Control Act):**

Substance is listed.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

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Trade name: Variant/Variant II Total GHb Elution Buffer 1

(Contd. of page 4)

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Markings according to EU guidelines:***Observe the general safety regulations when handling chemicals**The substance is not subject to classification according to EU lists and other sources of literature known to us.**The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).*· **National regulations**· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**16 Other information:**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental Health and Safety.· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· * **Data compared to the previous version altered.**

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Variant/Variant II GHb Calibrator Diluent
- **Catalog or product number:** 270-0606
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.
- **Chemical characterization**

Listing of dangerous and non-hazardous components:

boric acid	Repr. Cat. 2; T; R 60-61	0.01-0.1%
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3 Hazards identification

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment** not applicable
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant/Variant II GHb Calibrator Diluent

(Contd. of page 1)

· **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** Dilute with plenty of water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

boric acid

TLV (United States)	Short-term value: 6* mg/m ³ Long-term value: 2* mg/m ³ *as inhalable fraction
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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

9 Physical and chemical properties:

· **General Information**

Form:	liquid
Color:	Colorless

(Contd. on page 3)

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Trade name: Variant/Variant II GHb Calibrator Diluent

(Contd. of page 2)

Odor:	Odorless
· Change in condition Melting point/Melting range: 0°C Boiling point/Boiling range: 100°C	
· Flash point:	Not applicable
· Danger of explosion:	Product does not present an explosion hazard.
· Vapor pressure at 20°C:	23 hPa
· Density at 20°C:	1 g/cm ³
· Solubility in / Miscibility with Water:	Fully miscible
· pH-value at 20°C:	7.8
· Organic solvents:	0.0 %
· Water:	99.9 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The substance is not subject to classification according to the latest version of the EU lists.
- **Target organs:** Not applicable.

12 Ecological information:

- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation** Hand over to hazardous waste disposers.

(Contd. on page 4)

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Trade name: Variant/Variant II GHb Calibrator Diluent

(Contd. of page 3)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

- **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

- **Section 313 (40CFR372.65):**

Substance is not listed.

- **TSCA (Toxic Substances Control Act):**

7732-18-5 water

boric acid

151-50-8 potassium cyanide

- **California Proposition 65:**

- **Developmental Toxicity**

32986-56-4 tobramycin

1405-41-0 Gentamicin Sulfate

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

- **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

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Material Safety Data Sheet

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Trade name: Variant/Variant II GHb Calibrator Diluent

(Contd. of page 4)

The substance is not subject to classification according to EU lists and other sources of literature known to us.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

- **National regulations**
- **Water hazard class:** Generally not hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Environmental Health and Safety.
- **Contact:**
Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000
- **Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000**
- *** Data compared to the previous version altered.**

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Variant Hemoglobin Analytical Cartridge (GHb)
- **Catalog or product number:** 270-0601
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **Information department:** Technical services, customer support.
- **Emergency information:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

7732-18-5	water		50-100%
117163-31-2	Hydrophilic vinyl polymer		2.5-5%
141-43-5	2-aminoethanol	C, Xn; R 20/21/22-34	1.0-2.5%

- **Additional information** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:** not applicable
- **Information pertaining to particular dangers for man and environment**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant Hemoglobin Analytical Cartridge (GHb)

(Contd. of page 1)

· **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

141-43-5 2-aminoethanol

PEL (United States)	6 mg/m ³ , 3 ppm
REL (United States)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 8 mg/m ³ , 3 ppm
TLV (United States)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 7.5 mg/m ³ , 3 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

Material Safety Data Sheet

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Reviewed on 10/21/2009

Trade name: Variant Hemoglobin Analytical Cartridge (GHb)

(Contd. of page 2)

9 Physical and chemical properties:

· General Information

Form: liquid
Color: According to product specification
Odor: Odorless

· Change in condition

Melting point/Melting range: undetermined
Boiling point/Boiling range: undetermined

· Flash point: Not applicable

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Vapor pressure at 20°C: 23 hPa

· Density: Not determined

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix

· Solvent content:

Organic solvents: 1.6 %
Water: 92.7 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

· Acute toxicity:

· LD/LC50 values for hazardous components per OSHA criteria:

141-43-5 2-aminoethanol

Oral	LD50	2050 mg/kg (rat)
Dermal	LD50	1000 mg/kg (rbt)

· Primary irritant effect:

- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.

· **Sensitization:** No sensitizing effects known.

· Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant Hemoglobin Analytical Cartridge (GHb)

(Contd. of page 3)

· **Target organs:** Not applicable.

13 Disposal considerations

- **Product:**
- **Recommendation** Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

7732-18-5	water
141-43-5	2-aminoethanol
25952-53-8	N-(3-Dimethylaminopropyl)-N-ethylcarbodiimide hydrochloride

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant Hemoglobin Analytical Cartridge (GHb)

(Contd. of page 4)

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **National regulations**· **Technical instructions (air):**

Class	Share in %
NK	1.0-2.5

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental Health and Safety.· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· * **Data compared to the previous version altered.**

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** Variant/Variant II Total GHb Elution Buffer 2
- **Catalog or product number:** 270-0603
- **Application of the substance / the preparation** *In-vitro laboratory reagent or component*
- **Manufacturer/Supplier:**
 Bio-Rad Laboratories, Diagnostic Group
 4000 Alfred Nobel Drive
 Hercules, California 94547 1(510)724-7000
- **Information department:** *Technical services, customer support.*
- **Emergency information:**
 1(800) 424-9300 *Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.*

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
 7732-18-5 water
- **Identification number(s):**
- **EINECS Number:** 231-791-2
- **Additional information:** *For the wording of the listed risk phrases refer to section 15.*
- **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**

50-70-4	D-glucitol	1.0-2.5%
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3 Hazards identification

- **Emergency overview:** *not applicable*
- **Information pertaining to particular dangers for man and environment** *not applicable*
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **NFPA ratings (scale 0-4)**
 Health = 0
 Fire = 0
 Reactivity = 0

4 First aid measures

- **General information** *No special measures required.*
- **After inhalation** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact** *Generally the product does not irritate the skin.*
- **After eye contact** *Rinse opened eye for several minutes under running water.*
- **After swallowing** *Induce vomiting and call for medical help.*

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant/Variant II Total GHb Elution Buffer 2

(Contd. of page 1)

5 Fire fighting measures

- **Suitable extinguishing agents**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** Dilute with plenty of water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

26628-22-8 sodium azide

REL (United States)	Short-term value: C 0.3** mg/m ³ , C 0.1* ppm *as HN3 vapor; **as NaN3; Skin
TLV (United States)	Short-term value: C 0.29** mg/m ³ , C 0.11* ppm *as HN3 vapor **as NaN3

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant/Variant II Total GHb Elution Buffer 2

(Contd. of page 2)

· **Eye protection:** Safety glasses**9 Physical and chemical properties:**· **General Information**

Form:	liquid
Color:	Colorless
Odor:	Odorless

· **Change in condition**

Melting point/Melting range:	0°C
Boiling point/Boiling range:	100°C

· **Flash point:** Not applicable· **Danger of explosion:** Product does not present an explosion hazard.· **Vapor pressure at 20°C:** 23 hPa· **Density at 20°C:** 1 g/cm³· **Solubility in / Miscibility with**

Water:	Fully miscible
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· **pH-value at 20°C:** 5.5· **Organic solvents:** 0.0 %· **Water:** 96.8 %**10 Stability and reactivity**· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.· **Materials to be avoided:**· **Dangerous reactions**

This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.

· **Dangerous products of decomposition:** No dangerous decomposition products known**11 Toxicological information**· **Acute toxicity:**· **Primary irritant effect:**· **on the skin:** No irritant effect.· **on the eye:** No irritant effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification according to the latest version of the EU lists.

· **Target organs:** Not applicable.

DUS

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: Variant/Variant II Total GHb Elution Buffer 2

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12 Ecological information:

- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation**
Dispose of waste in accordance to applicable national, regional, or local regulations.
Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

- **Section 302/304 (40CFR355.30 / 40CFR355.40):**

Substance not listed.

- **Section 313 (40CFR372.65):**

Substance is not listed.

- **TSCA (Toxic Substances Control Act):**

7732-18-5	water
50-70-4	D-glucitol
26628-22-8	sodium azide
1310-73-2	sodium hydroxide

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Material Safety Data Sheet

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· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The substance is not subject to classification according to EU lists and other sources of literature known to us.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **National regulations**· **Water hazard class:** Generally not hazardous for water.**16 Other information:**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental Health and Safety.· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· * **Data compared to the previous version altered.**